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First record of the genus *Psalmopoeus* (Araneae: Theraphosidae) in Brazil

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Abstract: We present the first record for the genus *Psalmopoeus* Pocock, 1895, in Brazil. A female of *Psalmopoeus irminia* Saager, 1994, was collected in Pacaraíma, state of Roraima, Brazil. This country now has records of all New World tarantula genera of the subfamily Avicullariinae.

Key words: Amazon; Pacaraíma; Roraima; Tarantula

Avicullariinae is one of the three theraphosid subfamilies recorded in the New World. It contains tarantula species of the New World genera *Avicularia* Lamarck, 1818, *Ephebopus* Simon, 1892, *Iridopelma* Pocock, 1901, *Pachistopelma* Pocock, 1901, *Psalmopoeus* Pocock, 1895, *Tapinauchenius* Ausserer, 1871, *Typhochlaena* C. L. Kock, 1850 and the Old World genera *Heteroscodra* Pocock, 1899 and *Stromatopelma* Karsch, 1881 (West et al. 2008; Bertani 2012). With the exceptions of the *Ephebopus* species, which are fossorial, and *Psalmopoeus* and *Tapinauchenius* which are opportunistic (West et al. 2008), species of all other genera are arboreal, building their retreats on leaves of trees or bushes, tree trunks, palm trees or other plants such as bromeliads (West et al. 2008; Bertani 2012) and sometimes even on human constructions.

Brazil is home to approximately 20% of the tarantula species (Theraphosidae) (World Spider Catalog 2015) and is particularly rich in arboreal species. Three of the New World avicullariine genera are endemic to Brazil (*Iridopelma*, *Pachistopelma* and *Typhochlaena*; Bertani 2012), and all avicullariine genera have been recorded in Brazil, except *Psalmopoeus* (World Spider Catalog 2015).

To date, *Psalmopoeus* has 10 described species, distributed from Mexico southwards through all of Central America and the northern portion of South America: Colombia, Ecuador, Venezuela and the southernmost part of the Caribbean (Trinidad) (World Spider Catalog 2015). Despite its occurrence in neighboring countries, there is no record of any species of the genus in Brazil.

Herein we record for the first time in Brazil the species *Psalmopoeus irminia* Saager, 1994, in Pacaraíma, state of Roraima.

The studied area is situated close to the northern border of Brazil and Venezuela, in the municipality of Pacaraíma, state of Roraima, Brazil, near the right bank of the Miang River (04°29′44″ N, 061°07′27″ W; datum: WGS84) (Figure 1). It is a raised area, ca. 900 m above sea level, on the southern border of the Paracaíma Mountains. The higher areas are predominantly covered by savannah vegetation whereas the lower areas are covered by forests, with higher humidity and perennial rivers (Figure 2). Even though the forested areas have high trees, they differ from the typical Amazon forest. The climate is seasonal with a long rainy tropical period and a short dry period (SEPLAN/RR 2014). The mean annual temperature is 26°C and the rain precipitation 1,750 mm (SEPLAN/RR 2014).

The *Psalmopoeus irminia* specimen was seen in the early evening of 12 August 2015, close to its tubular web retreat, in a forested area near the Miang River. The retreat was at approximately 1.60 m from the ground ending into rock crevices. The specimen was collected after removing the loosened rocks and exposing the spider. It was photographed (Figure 3) and fixed in 92% ethanol (collecting permit SISBIO 7422-1). The specimen

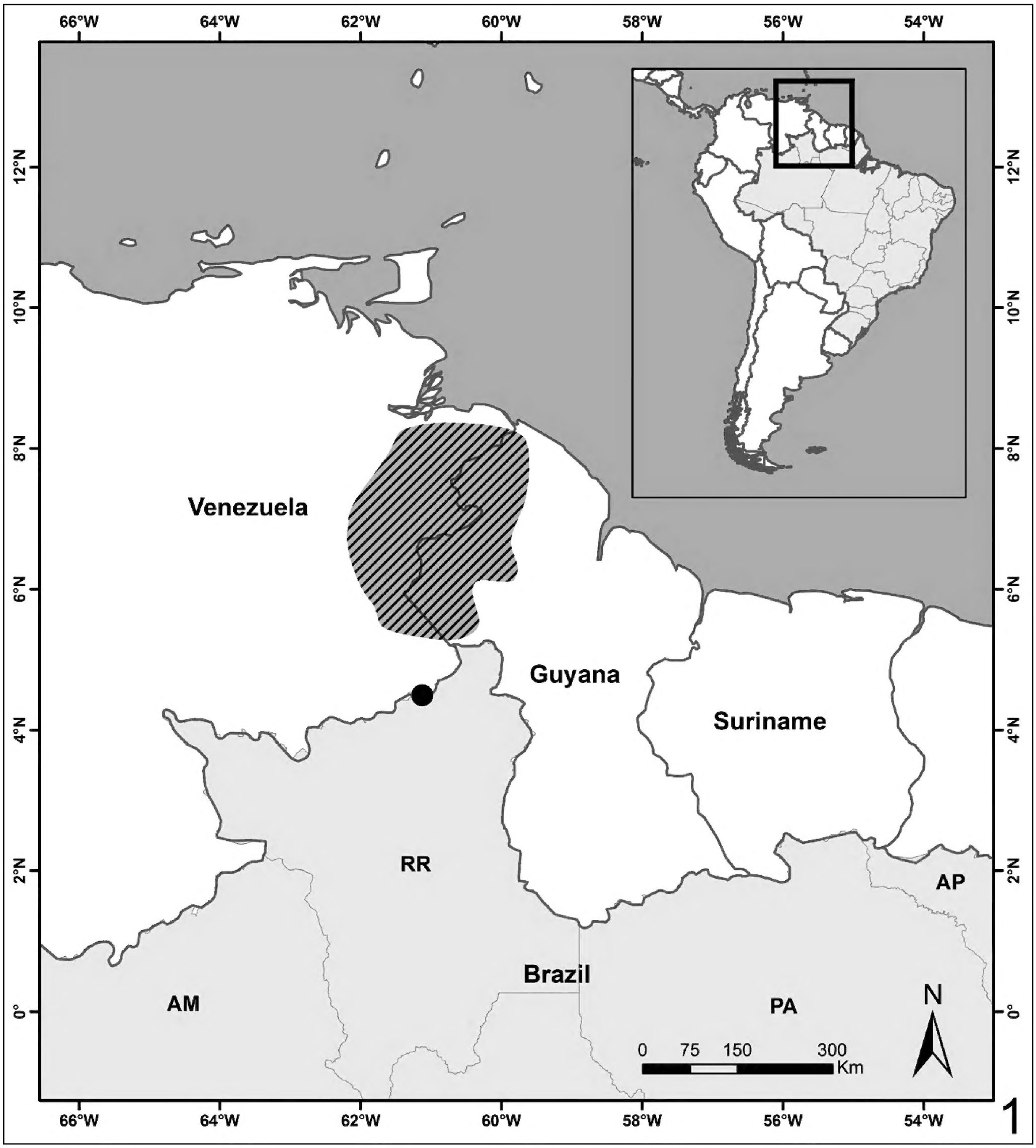
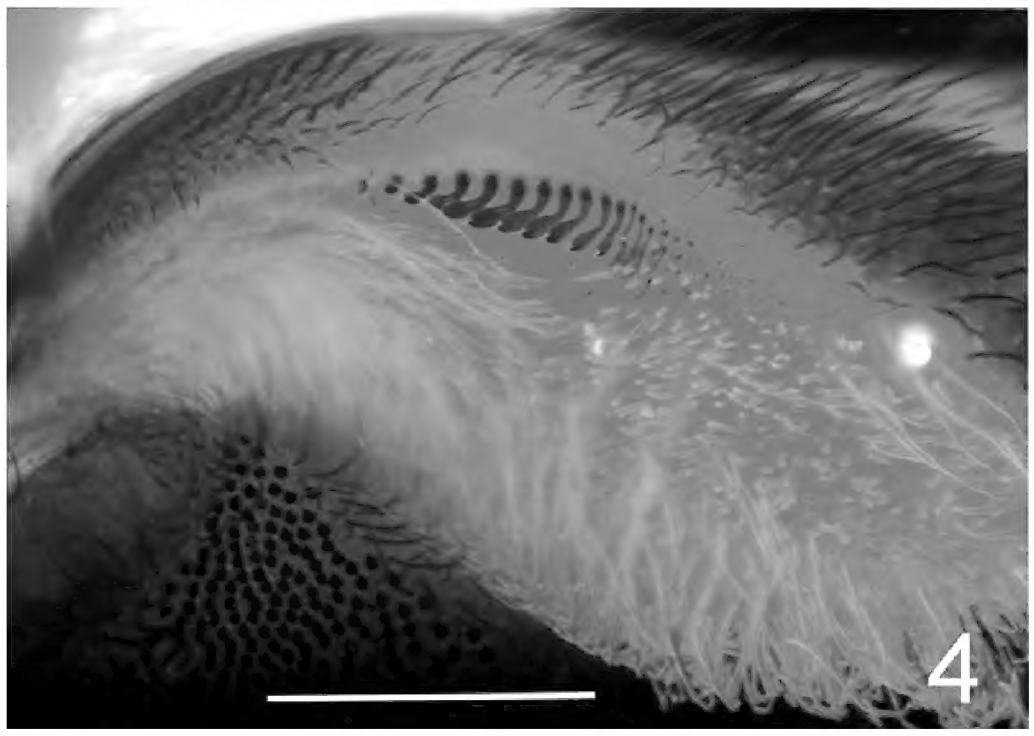
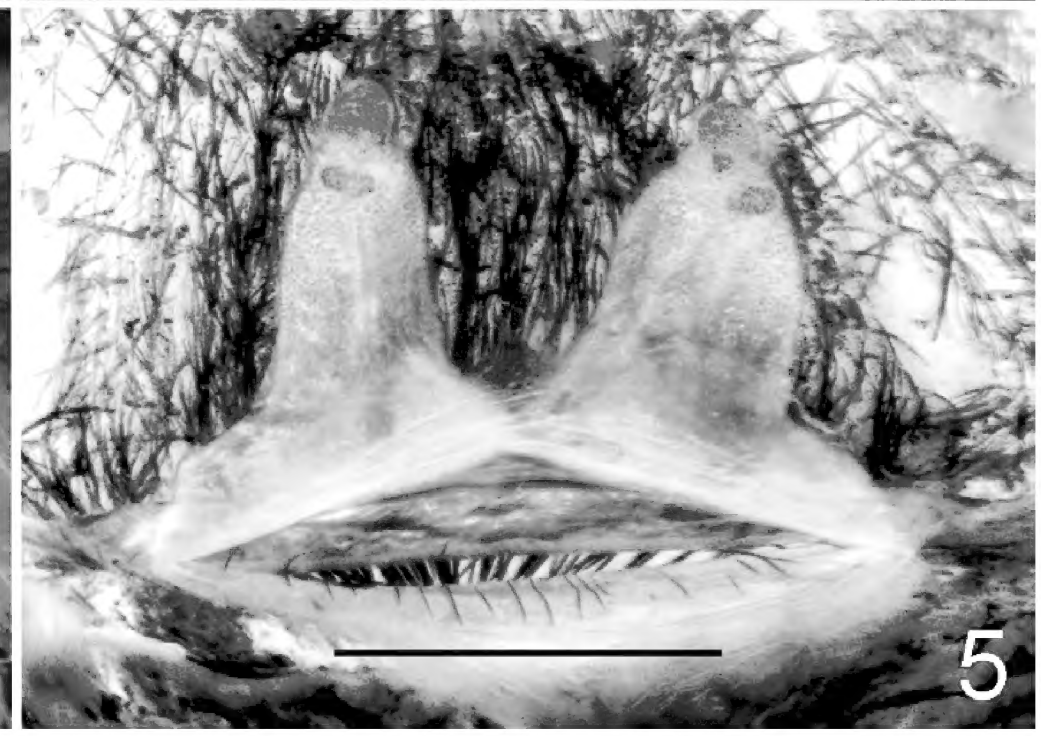


Figure 1. Map showing the distribution of *Psalmopoeus iminia* in northern South America. The shaded area represents published records, the black circle the new record in Paracaíma, State of Roraima, Brazil.

is housed at the Museu Nacional do Rio de Janeiro, Rio de Janeiro (MNRJ 6872).

The specimen collected in Brazil has a lyra on the prolateral face of the maxillae (Figure 4) which is a diagnostic character for the genus *Psalmopoeus* (Pocock 1895; Simon 1903; West et al. 2008). The spermathecae shape (Figure 5) agrees with the description of *P. irminia*, i.e., two long and weakly sclerotized spermathecae ending in a more sclerotized receptaculum and bearing smaller receptacula positioned below, close to the apical one (Figure 5; Saager 1994 figure 6A). The color pattern also agrees with *P. irminia*, as it bears a dark coloration on the cefalothorax and legs, with orange stripes on dorsal the tarsi, metatarsi and tibiae of all legs, and, the abdomen dorsally black with two parallel series of 4/5 orange spots (Figure 3).





Figures 2–5. *Psalmopoeus irminia* from Pacaraíma, state of Roraima, Brazil. **2:** General aspects of the vegetation in the locality, a mixture of savannah and forest. **3:** Live female. **4:** Prolateral left maxillae, showing the lyra. **5:** Spermathecae, dorsal. Scale bars: 1 mm. Photos by Marco A. de Freitas (2) and Arthur Sena (3).

Species of *Psalmopoeus* are distributed from Mexico throughout Central America to northern South America (Colombia, Ecuador, and Venezuela) and the southernmost part of the Caribbean (Trinidad). Its core distribution is in the Central America, where it is the main aviculariine representative. Only two records exist for other Central American aviculariines: *Avicularia glauca* Simon, 1891 in Panamá and *Avicularia avicularia* in Costa Rica (Valerio 1979). In South America, *Psalmopoeus* is distributed mainly on the western part of the continent — Colombia and Ecuador; or in Venezuela, which is situated on the northern border of the continent. *Psalmopoeus* spp. are absent in other regions of South America, or are very rare, probably reflecting a northern origin with limited dispersion southwards. Therefore, the record herein presented is a new record for Brazil and one of the southernmost records for the genus *Psalmopoeus* in northern South America as well.

The climate and vegetation in the Paracaíma region are similar to those described by Saager (1994) for the area of occurrence of *P. irminia* in Venezuela. Thus, it is very probable that occurrence of the species in the north and northwestern portion of the state of Roraima is associated with similar forests in high altitudes. The lack of previous records for *P. irminia* in Brazil can be explained by the rarity of faunistic inventories concerning spiders on the northern boundary of the country.

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Author contributions: RB identified the specimen, took morphological photographs, wrote the text; AS produced the map; AS, ADA, FRO and MAF participated in the field trip, found and collected the specimen and improved the text.

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